

### **SECTION 3**

## **INVENTORY OF EXISTING CONDITIONS**

This section documents the number, type and general description of the existing facilities at Cochise College Airport. Current airport activity is also described. This inventory of facilities and activity provides the baseline for comparing existing capacities with future requirements to establish needs.

The following subsections describe the airport including the airfield, navigational aids (navaids), aircraft parking apron, aircraft storage shelters, administration offices, classrooms, hangars, ground access, parking, utilities and the physical characteristics of the airport site.

### ***AIRPORT LOCATION, HISTORY AND ROLE***

#### ***Airport Location***

The Cochise College Douglas campus and airport are located north of U.S. Highway 80, approximately eight miles west of Douglas and 16 miles east of Bisbee in southeastern Arizona (Figure 3-1). The principal economic activities in the region are mining, ranching and manufacturing. The community of Douglas accounts for the majority of manufacturing, while mining activity is centered around Bisbee. Ranching is conducted in the rural areas of the valley including the area surrounding the Douglas campus and airport.

The airport is one of four public-use airports in the area. The other public-use airports are Bisbee Douglas International (eight miles northeast), Douglas Municipal (11 miles southeast) and Bisbee Municipal (11 miles west).

#### ***History and Management of Airport***

Approximately 527 acres were donated to Cochise College for the Douglas campus, which was opened in September 1964. The airport was established on the campus in 1968 with an unpaved runway in the location of the present runway. The Technology Center, a large classroom/hangar building, was completed in 1969. In 1975, the runway was paved, and in 1983 a full-length parallel taxiway was constructed. The airport currently occupies approximately 122 acres of the Douglas Campus. There are no aviation easements in effect at the airport. However, the existing Runway

Protection Zones (RPZs) extend beyond the airport property boundary, and the acquisition of aviation easements for the RPZs would protect against future development in these areas.

Capital improvement projects at the airport over the past five years have been:

- Fiscal year 1995 – Resurface runway, taxiway and apron; visual approach guidance indicator; security fence
- Fiscal year 1997 – Resurface runway, taxiway and apron
- Fiscal Year 1998 – Replace Precision Approach Path Indicators (PAPIs); security lighting
- Fiscal year 1999 – Structural upgrade of end of Runway 23

Cochise College operates and manages the airport under the direction of the Director of Aviation Programs, who also acts as airport manager. Maintenance functions are performed by the Maintenance Department of the College.

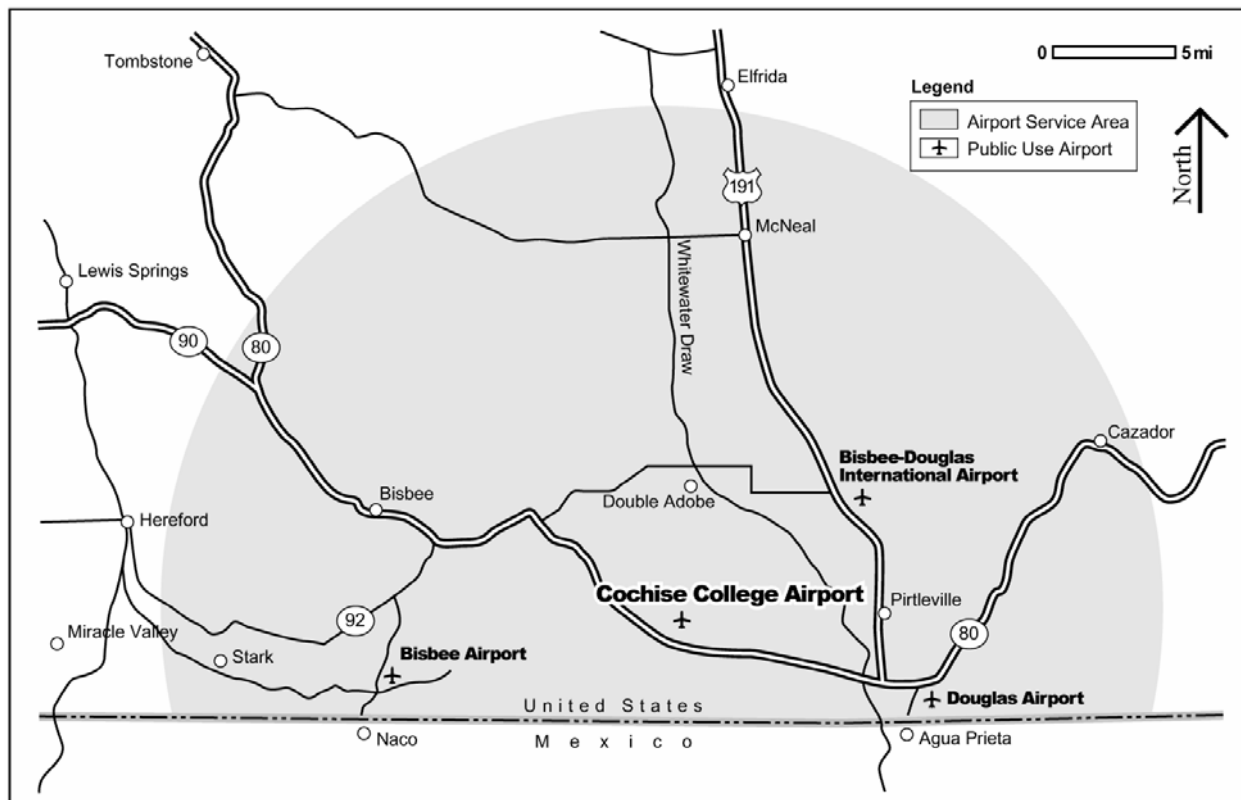


Figure 3-1  
**Airport Location and Service Area**

### ***Airport Role and Classification***

Cochise College Airport is a public use airport, being open to the public and serving transient aircraft. Its primary function is to accommodate the College's aviation program. Currently, all aircraft permanently based at the airport are owned and operated by the College. The College does not function as or provide the full services of a traditional Fixed Base Operator (FBO). It is not the intention of the College to do so since it cannot compete, due to its governmental status, with private business. However, fuel services and limited emergency maintenance are available during normal operating hours of the College during the normal business week, and transient parking and tie-downs are available to the public.

**Arizona State Aviation System.** The Arizona state aviation system is segregated by the Arizona Department of Transportation (ADOT), Aeronautics Division into three subsystems: a Primary system, a Secondary system, and an Emerging Rural Airport category.<sup>1</sup> System airports are divided into these three categories primarily by size and usage. In order for airports to be included under the Primary system, it must be open to the public and meet at least one of the following criteria:

- Have 10 or more based aircraft and/or 2,000 or more yearly operations, or
- Have scheduled air carrier service, or
- Receive commuter service regularly, or
- Are projected to meet any of the above criteria within 10 years.

Cochise College Airport is one of 64 airports included in the State's Primary airport system.

In order to ensure the State of Arizona's airport system is safe and efficient, ADOT has established a classification system and related development standards and planning guidelines for the State's public-use airports. Cochise College Airport is classified as a General Utility - Stage I airport. This type of airport serves all small airplanes, airplanes with 12,500 pounds or less maximum certificated takeoff weight.

**National Plan of Integrated Airport Systems.** The airport is not included in the National Plan of Integrated Airport Systems (NPIAS). Airports can be excluded from the NPIAS if they do not meet the minimum entry criteria of 10 based aircraft, are within 20 miles of a NPIAS airport, or are located at inadequate sites and cannot be expanded or improved to provide safe and efficient airport facilities. Cochise College Airport is within 20 miles of Bisbee Douglas International and Bisbee Municipal, which are NPIAS airports.

**FAA Airport Classification.** The airport is currently designed to meet the FAA's ARC B-I standards, for small airplanes only. This category includes aircraft as large as the Beech Baron, Beech King Air B100, Cessna 404, and Piper Cheyenne.

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<sup>1</sup> Arizona Department of Transportation, Aeronautics Division, Arizona State Aviation Needs Study (SANS) 2000, Draft Interim Report, August 1999.

***RUNWAY/TAXIWAY SYSTEM******Runway***

The Airport has a single runway, designated Runway 5/23, as shown on Figure 3-2 (for an exhibit of the entire airport including Runway Protection Zones, see Figure 7-1 in Section 7). The runway is of asphalt construction and is 5,303 feet long and 72 feet wide. The Runway 23 landing threshold is displaced 500 feet to allow clearance of the approach slope over a road at the east side of the airport. The displaced threshold provides a Runway 23 landing length of 4,803 feet. The true bearing of the runway is North 57° 35' 55" East. The established airport elevation, defined as the highest point along any of an airport's runways, is 4,143 feet mean sea level (MSL), which is found at the end of Runway 5.

The runway pavement strength has not been rated but has been demonstrated to handle a Convair 340 (gross take-off weight of 49,000 pounds) and 12,500 pounds for single-wheel landing gears. The runway pavement was patched, crack-sealed and seal-coated in 1995, and is presently in good condition. The State is conducting a Pavement Management Program, which includes a survey of pavement conditions. Results of this program are expected at the end of this year.

Runway 5/23 is equipped with low intensity runway edge lights (LIRL) and each end of the runway is equipped with threshold lights which indicate the beginning of usable runway. The runway is marked with visual markings. These typically include centerline, designator (runway number), threshold markings and aiming points, and the Cochise College runway includes all these markings.

A lighted segmented circle, tetrahedron, and wind sock are located to the north of the runway at approximately midfield. The segmented circle and tetrahedron indicate the airport traffic pattern and normal landing direction, respectively. Cochise College Airport operates with standard left traffic patterns. The calm-wind runway is Runway 5, on which approximately 60 to 70 percent of operations take place.

***Taxiways***

The runway is served by a full parallel taxiway, which is 20 feet wide and provides access to all airport facilities on the south side of the runway (Figure 3-2). The centerline-to-centerline separation of the runway and taxiway is 200 feet. The runway is served by one right-angle exit taxiway at approximately mid-field and entrance taxiways at each end of the runway, that facilitate exiting and entering the runway for operations from both directions. The parallel taxiway and exit taxiways are lighted with low intensity taxiway edge lights (LITL).

The taxiway pavement was patched, crack-sealed and seal-coated in 1995, and is presently in good condition.

## ***NAVIGATIONAL AND VISUAL AIDS***

### ***Navigational Aids (Nav aids)***

There are no published instrument approach procedures for the airport. An instrument approach procedure is a series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a point where a landing may be made visually. The procedure provides protection from obstacles that could jeopardize safety of aircraft operations by providing a specific clearance over obstacles. There are two types of procedures: precision and non-precision instrument approaches. A precision approach procedure is one in which an electronic glide slope is provided that gives the pilot glide path, or specific descent profile guidance. A non-precision approach is a procedure in which no electronic glide slope is provided. In this case, the pilot is provided with directional, or azimuth, guidance only.

The nearest airport with published instrument approaches is Bisbee Douglas International.<sup>2</sup>

A UNICOM is maintained at the airport. This service provides local traffic pattern advisories but is not used for air traffic control purposes. There is no air traffic control tower (ATCT) at the airport. The Douglas VORTAC is located approximately eight miles northeast of the Airport. It can be used for enroute navigation.

Assistance from the Flight Service Station (FSS) is available to pilots in the Cochise College Airport. The services which are provided by the FSS include:

- Issuance of Notices to Airmen (NOTAM's)
- Dissemination of Pilot Reports (PIREP's) to interested parties
- Issuance of weather data
- VFR advisory service
- Direction finding assistance to "lost" aircraft
- Pilot briefing service
- Flight plan assistance

### ***Visual Aids***

The Airport is equipped with the following visual aids to assist pilots in locating the runway at night or during periods of reduced visibility.

**Precision Approach Path Indicator (PAPI).** The PAPI system provides vertical visual glide path information to approaching pilots and consists of two light bars, one each located on the left side of each runway. The number of lights on the two bars can be either two (a PAPI-2) or four (a PAPI-4).

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<sup>2</sup> A VOR/DME or GPS approach to Runway 17 at Bisbee Douglas International provides landing minimums as low as 300 feet above ground level (AGL), with visibility of one mile, for small aircraft. A VOR approach provides minimums as low as 500 feet AGL with visibility of one mile for small aircraft.

The PAPI systems can usually be seen for five miles during the day and up to 20 miles at night. Both runway ends are equipped with a PAPI-4 system.

**Rotating Beacon.** A rotating beacon is a visual aid that indicates the location of an airport. Alternating white and green beams indicate an airport and the beacons are located either on or close to an airport. The beacon for Cochise College Airport is located on top of the Technology Center building and meets current FAA specifications.

## ***AIRSPACE***

The existing system of controlled airspace, enroute airways, navigational aids, and airports located in the vicinity of Cochise College Airport is depicted on Figure 3-3.

### ***Area Airports and Features***

Cochise College Airport is located at the southern end of the Sulphur Springs Valley. Mule Mountains are to the west and the Chiricahua Mountains are to the northeast.

Other nearby public airports are Bisbee-Douglas International to the northeast, Douglas Airport to the southeast, and Bisbee Airport to the west.

### ***Controlled Airspace***

There are a number of different controlled and special use airspace areas in the vicinity. Controlled airspace means an area in which some or all aircraft may be subject to air traffic control. It is a generic term that covers the different classification of airspace (Class A, Class B, etc.) and defined dimensions within which air traffic control service is provided to IFR and VFR flights in accordance with the airspace classification. The various controlled airspace areas found in the vicinity of Cochise College Airport are discussed below.

**Class E Airspace.** A Class E airspace area surrounds Bisbee Douglas International Airport. Class E airspace is controlled airspace, but is the least stringently controlled airspace classification in terms of pilot certification, aircraft equipment, and entry requirements. No separation services are provided to VFR aircraft in the Class E airspace area.

**Restricted Area.** Military aircraft operations form a large portion of air traffic in the area as evidenced by the military restricted areas and military operations areas. Restricted areas are designated airspace within which the flight of aircraft is subject to restriction. Restricted areas are typically associated with military operations and denote the existence of unusual, often invisible, hazards to aircraft such as artillery firing, aerial gunnery or guided missiles. Restricted Area R-2303C is located approximately 18 miles west of the airport. This restricted area serves Fort Huachuca and operates from 15,000 feet to 30,000 feet mean sea level (MSL).

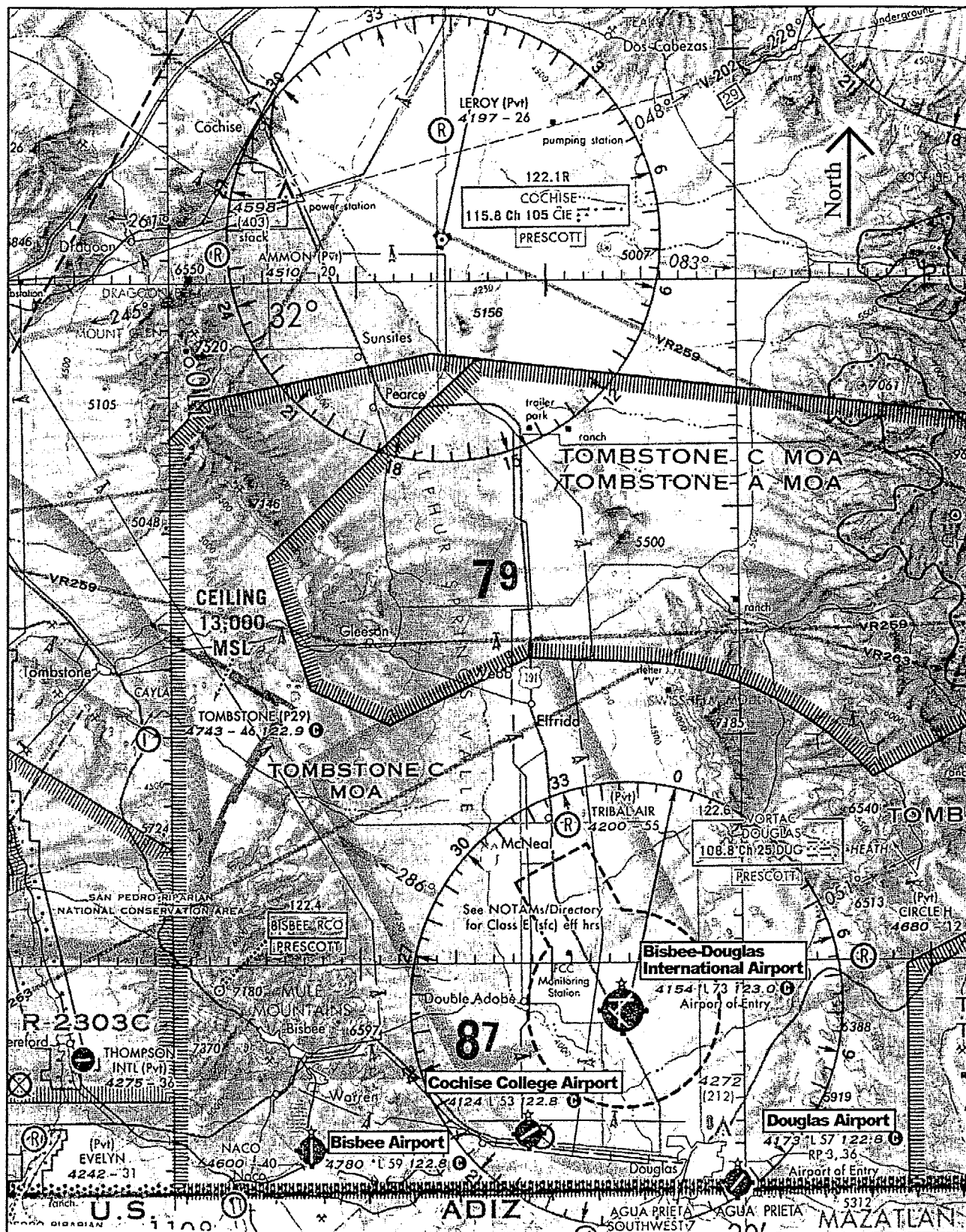


Figure 3-3  
 Airspace in the Vicinity of Cochise College Airport

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**Military Operations Areas (MOAs).** These are airspace assignments of defined vertical and lateral dimensions established to separate certain military activities from IFR traffic and to identify for VFR traffic where these activities are conducted. The Tombstone C MOA overlies the airport and surrounding area. It encompasses airspace from 14,500 feet MSL to 18,000 feet. The MOA is operational from 6:00 a.m. to 9:00 p.m., Monday through Friday. Tombstone A and B MOAs are located north and east of the airport, respectively. These MOAs encompass airspace from 500 feet above ground level (AGL) to 14,500 MSL. They are operational from 6:00 a.m. to 9:00 p.m., Monday through Friday.

**Military Training Routes.** Two military training routes pass in the vicinity of the airport. A visual military training route, VR 263 runs northwest, north and northeast of the airport. A second visual military training route, VR 259 runs north of the airport.

**Low Altitude Airways.** The low altitude airway segments that traverse the area serve those enroute aircraft flying below 18,000 feet MSL. Low altitude Federal Airway segments in the vicinity of the Airport include the following:

- V66 between the Douglas VORTAC (at Bisbee Douglas International Airport) and the Tucson VORTAC (at Tucson International Airport).
- V66 east of the Douglas VORTAC.

**National Conservation Area.** The San Pedro Riparian National Conservation Area lies to the west beyond Mule Mountains (Figure 3-3). Within this area aircraft must fly at a minimum altitude of 2,000 feet above the surface. The surface is defined as “the highest terrain within 2,000 feet laterally of the route of flight, or the uppermost rim of a canyon or valley.”

### ***Local Operating Procedures***

The local traffic pattern is at an altitude of 5,000 feet MSL and is a left pattern for both runway directions.

There are no noise abatement procedures in effect at the airport. There are no Standard Instrument Arrival Routes (STARs) or Standard Instrument Departures (SIDs) at the airport.

### ***TECHNOLOGY CENTER BUILDING***

The Technology Center, a large building located south of the runway, serves the aviation program as well as the nursing and motor transport programs of the College. The aviation program occupies about 28,000 square feet of the 38,000-square foot building. The facility includes an aircraft maintenance hangar, shops, classrooms, flight training simulator facilities, dispatch area and administrative offices for the aviation program. The building was completed in 1969; about five years ago a break room and restrooms were added at the rear of the building. Two adjacent Quonset buildings provide additional storage space.

***AIRCRAFT STORAGE SHELTERS***

There is a single aircraft shelter (shade) facility containing 10 spaces located west of the Technology Center. This building encompasses 19,600 square feet. This facility normally accommodates all aviation program aircraft since about five of the fifteen Cochise College aircraft are typically in use at the Tucson program or in maintenance.

***AIRCRAFT PARKING APRON***

An apron on the south side of the runway, west of the aircraft shelters, contains 24 paved aircraft tie-downs in five rows. This apron is approximately 15,000 square yards and provides parking for based and transient aircraft. The condition of apron pavement is fair. The pavement requires crack repair and seal coating.

***AIRCRAFT WASH RACK***

An aircraft wash rack is located behind the Technology Center building.

***AVIATION GAS STORAGE AND FUELING SERVICE***

The bulk aviation gas (avgas) storage facility serving the airport operations consists of a 10,000-gallon aboveground steel tank with secondary containment used for 100 octane low lead avgas. No jet fuel is available. The fuel tank was installed seven years ago and is in excellent condition. The National Fire Code, in NFPA 30, (Flammable and Combustible Liquids Code) requires that these types of tanks meet Underwriter's Laboratory Standard 142 for steel aboveground tanks for flammable and combustible liquids. The tank's nameplate indicates that the tank meets Underwriter's Laboratory Standard 142. An adjacent similar tank stores motor fuel. Arizona Department of Environmental Quality Regulation 98-004 only regulates underground storage tanks.

The storage tank is sufficient in size to meet existing demands. Aviation fuel is pumped on the ramp by a single fueling truck. Fueling is available to the public from 8:30 a.m. to 4:30 p.m.

***AIRPORT MAINTENANCE FACILITIES***

Airport maintenance is performed by the campus maintenance staff using campus maintenance facilities and equipment. Campus maintenance facilities, are located southeast of the Technology Center. An approximately 10,000 square foot maintenance building, two smaller Quonset buildings, and a storage yard occupy this area. The College employs a maintenance staff of about five to maintain all campus facilities, including the airport.

***AUTOMOBILE ACCESS, SIGNAGE AND PARKING***

The airport is accessed via U.S. Highway 80 from the main College entrance, a two-lane 24-foot circle drive with two-way traffic. The presence of the airport is readily visible from the highway

and the circle drive. There is no public transportation available to the College from either Bisbee in the west or Douglas in the east.

There are no standard airport general information signs on Highway 80 indicating to a motorist that they are approaching an airport from either the east or west direction. On campus, there is only a single sign indicating the location of the Aviation Technology building.

The main auto parking lot serving the airport, with 80 spaces (including 3 handicapped spaces), is a paved lot located in front of the Technology Center building. This lot is about 12,000 square feet in size and accommodates students and employees. There are eight additional spaces at the southeast corner of the building. The open parking area to the south of the main lot is unpaved and is used for overflow parking but does not have marked spaces. These parking areas are also used by students of the nursing and motor transport programs located in the same building. Due to the size of some classes in the other programs, parking on the paved area is insufficient at times.

### ***AIRPORT RESCUE AND FIRE-FIGHTING (ARFF)***

Airport rescue and fire-fighting (ARFF) services are provided by the City of Douglas Fire Department. Portable fire extinguishers are located at the airport for minor fires.

### ***UTILITIES AND PUBLIC SERVICES***

Utility services at the airport are provided by the following suppliers:

- Electric power: Arizona Public Service
- Natural gas: Southwest Gas
- Telephone: Qwest
- Long distance: MCI
- Water: College owned & operated well
- Sanitary sewer: College owned & operated septic tank system
- Solid waste: USA Waste of Arizona

Electric service to the Aviation Technology building is provided at 480 volts alternating current (VAC), 3-phase. Transformers step down this service to 277 VAC for lighting and 110 VAC for power outlets. Separate circuits with the Aviation Technology Building provide power to the runway lights, taxiway lights and the west PAPI units. The east PAPI unit is supplied from a circuit providing power to the rodeo area. Campus maintenance personnel report that the service to the campus is adequate but recommend a load study be accomplished prior to adding electrical loads to the Aviation Technology Building. The campus does not have any emergency power units except for uninterrupted power supply (UPS) units for the computers.

Natural gas service to the campus was upgraded by Southwest Gas two years ago. The heating and air conditioning units for the Aviation Technology building were replaced with new energy efficient units within the last five years.

The telephone network at the Douglas campus is connected to the telephone network at the Sierra Vista campus by a T1 line. The system is spanned by another T1 line to the Qwest equipment in Sierra Vista. This allows both campuses to connect with one another by using only the four-digit extension number. The original equipment was replaced in August 2000 by a new system made by NORTEL Corporation. Expansion of the campus networks can be accomplished by replacing a 16-port card with a 24-port card.

The campus water supply, both domestic and fire suppression, is provided by two deep wells pumps that discharge into a 100,000-gallon surface water tank. The deep well pumps are driven by 75-horsepower electric motors. The pumps can be driven by natural gas engines (one is rigged to run on propane in case of loss of the natural gas supply). The College maintains the pumps on a 5-year overhaul cycle to assure reliability. A booster pump maintains a pressure of 60 pounds per square inch on the system. The water in the storage tank is turned over daily.

Sanitary sewer waste disposal is by an aeration pond located on campus. The system has been recently upgraded and inspected by the Arizona Department of Environmental Quality and meets all current standards. The College has four licensed operators to operate and maintain the system.

### ***SECURITY FACILITIES AND SERVICES***

The airfield portion of the Douglas Campus is fenced with a 4.5-foot high woven wire fence in the locations shown on the Airport Layout Plan. There is no perimeter road adjacent to the fencing. The areas adjacent to the Technology Building are fenced with a 6-foot high chain link fence. Manually operated vehicle gates are provided at two locations.

Security services are furnished by contract with Wackenhut. These services include a 24 hour unarmed campus patrol. Law enforcement resources are available by dialing 911. Response is available from the City of Douglas, Cochise County Sheriff's Department, and the US Border Patrol.

### ***REVENUE GENERATING AREA AND AIRPORT TENANT***

An area along the parallel taxiway northeast of the Technology Center is leased to TRW, Inc. TRW occupies two single-wide trailer units and a canvas arched hangar northeast of the ramp area. TRW does sporadic testing activities at the airport for the Unmanned Aerial Vehicle (UAV) program, in conjunction with Fort Huachuca in Sierra Vista. The hangar is used for the storage of ultralight aircraft owned and operated by TRW in the UAV program.

### ***AIRPORT ACTIVITY***

#### ***Based Aircraft***

A based aircraft is one that is permanently stationed at an airport. Available records show that there were 13 aircraft in the aviation program in 1978 and 1983. Based aircraft increased to 15 by 1996. Today there are 15 aircraft based at the airport (Table 3-1). Thirteen of the single engine aircraft and

the twin engine aircraft are used for flight training. The other single engine airplane is used in the Aviation Maintenance Technology (AMT) Program. Appendix B gives the based aircraft types and “N” numbers.

**Table 3-1**  
**PAST AND CURRENT BASED AIRCRAFT**  
**COCHISE COLLEGE AIRPORT**

<b>Aircraft Type</b>	<b>1978 [a]</b>	<b>1983 [a]</b>	<b>1996 [b]</b>	<b>2000 [c]</b>
Single Engine Piston	[d]	11	13	14
Multi Engine Piston	[d]	2	2	1
<b>Total</b>	<b>13</b>	<b>13</b>	<b>15</b>	<b>15</b>

[a] Source: *Cochise College Airport Master Plan*, Johannessen & Girand Consulting Engineers, Inc., January 1984.

[b] Source: FAA, *Airport Master Record, Form 5010-1*, August 1996.

[c] Source: *Cochise College Aviation Program*.

[d] Data not available.

### ***Aircraft Operations***

An aircraft operation, or movement, is defined as either a takeoff or landing, with a touch-and-go counting as two operations. All student flying is classified as general aviation, which includes all flying that is not for commercial passenger service or military. General aviation operations are categorized as either local or itinerant. A local operation is one that is performed by aircraft that: (1) operate in the local traffic pattern or within sight of the airport (including touch-and-go operations), (2) are known to be departing for or arriving from flights in local practice areas located within a 20-mile radius of the airport, or (3) execute simulated instrument approaches or low passes at the airport. Itinerant operations are all operations other than local. The itinerant operations include operations by transient aircraft, aircraft not based at the airport.

Aircraft operations were estimated to total 55,180 in 1999 (Table 3-2). Approximately 94 percent were local operations. In 1982, operations were estimated to total 46,523.

**Table 3-2**  
**PAST AND CURRENT AIRCRAFT OPERATIONS**  
**COCHISE COLLEGE AIRPORT**

Type Aircraft/Operation	1982 [a]	1996 [b]	1999 [b]
Air Taxi	[c]	480	480
General Aviation Local	[c]	51,650	51,650
General Aviation Itinerant	[c]	3,000	3,000
Military	[c]	50	50
<b>Total</b>	<b>46,523</b>	<b>55,180</b>	<b>55,180</b>

[a] Source: *Cochise College Airport Master Plan*, Johannessen & Girand Consulting Engineers, Inc., January 1984.

[b] Source: Federal Aviation Administration, *Airport Master Record*, Form 5010-1, August 1996 and September 1999.

[c] Data not available.

### ***Aviation Gas (Avgas) Consumption***

In 1999, approximately 32,000 gallons of avgas were pumped at the airport. Aviation gas is normally delivered to the airport four times a year by tanker truck in 8,000-gallon loads.

### ***CLIMATE***

The climate of the airport area is described in Section 8, Environmental Evaluation. The wind rose, indicating wind speed and direction, is shown on Figure 7-1 of Section 7, Airport Plans. Crosswind coverage at the airport is discussed in Section 5, Facility Requirements.